

Catalogue of the Type Specimens of Amphibians and Reptiles in the Herpetological Museum of the Chengdu Institute of Biology, Chinese Academy of Sciences: III. Snakes Excluding Viperids (Reptilia, Serpentes)

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Abstract In China, there are over 180 species of snakes in 57 genera and eight families (excluding the family Viperidae). In the Herpetological Museum of the Chengdu Institute of Biology (CIB), Chinese Academy of Sciences, the snake type specimens represent 11 species in 10 genera and three families (Xenopeltidae, Xenodermatidae and Colubridae). As a series of reports on the type specimens of Amphibia and Reptilia deposited in the Herpetological Museum of CIB, this paper focuses on the serpent families excluding Viperidae in the collections at this Museum.

Keywords snake, type specimen, Colubridae, Xenopeltidae, Xenodermatidae, taxonomy

1. Introduction

As a series of reports on the type specimens of Amphibia and Reptilia deposited in the Herpetological Museum of the Chengdu Institute of Biology (CIB), Chinese Academy of Sciences, this paper focuses on the serpent families excluding Viperidae. In China, there are over 180 species of snakes in 57 genera and eight families (Zhao, 2006), excluding the family Viperidae. In the Museum of CIB, the type specimens of these snakes belong to 11 species in 10 genera and three families (Xenopeltidae, Xenodermatidae and Colubridae).

Type specimens play a key role in animal identification, particularly for the snake taxa which are morphologically similar. In order to facilitate herpetological research for herpetologists in and outside of China, it is necessary to provide a list of the type specimens deposited in the Museum at CIB. Moreover, we provide some data on

body dimension and scalation characteristics for those groups of snakes.

2. Material and Methods

Classification of taxa mainly follows Zhao (2006) and the Reptile Database (<http://www.reptile-database.org>). All information for each type specimen of the 11 species is presented in the following format: family name, species name, information of the original description, the catalog number of holotype, sex, type locality, information of allotype (if any) and paratype, number and distribution of deposited specimens. Additional taxonomic notes on each species are provided where relevant under the heading “Comments”.

The abbreviations used in this paper are: SVL: snout-ventral length; TL: tail length; SPL: supralabial; IFL: infralabial; DS: dorsal scale; VS: ventral scale; and SC: subcaudal scale.

3. List of Type Specimens

Xenodermatidae

Achalinus meiguensis Hu and Zhao, 1966

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Received: 15 August 2012 Accepted: 26 November 2012

Achalinus meiguensis was described as a new species by Hu and Zhao in *Acta Zootaxon Sin*, 1966, 3(2): 162.

Holotype: CIB 008091, female (Figure 1).

Type locality: Meigu, Sichuan, China.

Other specimens (7): Baoxing (CIB 008093), Mt. Emei (CIB 008092, 008094–98) in Sichuan.

Distribution: Western Sichuan (Anxian, Hongya, Emei, Baoxing, Wenchuan, Meigu), China.

Comments: *Achalinus* was previously placed within Xenodermatinae under Colubridae. Wang *et al.* (2009) sequenced the complete mitochondrial DNA sequence of *Achalinus meiguensis* and conducted a phylogeny with relative snakes. Based on their study, Wang *et al.* (2009) proposed to elevate Xenodermatinae to family rank as Xenodermatidae.

Xenopeltidae

Xenopeltis hainanensis hainanensis Hu and Zhao, 1972

Xenopeltis hainanensis was described as a new species by Hu and Zhao in *Key Chin Snakes (= Mater Herpetol Res)*, 1972, 1: 36.

Holotype: CIB 008073, male (Figure 2).

Type locality: Dali, Lingshui, Hainan, China.

Allotype: CIB 008074, female, Baisha, Hainan.

Distribution: Hainan, China.

Comments: Hu and Zhao (1972) described *Xenopeltis hainanensis* based on the specimens from Hainan. Using the differences in ventral scale numbers between specimens from Hainan and mainland China, Zhao (1995) identified the specimens from mainland China as subspecies *Xenopeltis hainanensis jidamingae* Zhao, 1995. Recently, based on material from Yen Bai Province, Vietnam, Kizirian *et al.* (2003) suggested that *X. hainanensis jidamingae* be synonymized with *X. hainanensis hainanensis*.

Colubridae

Amphiesma optata (Hu and Zhao, 1966)

Natrix optata was described as a new species by Hu and Zhao in *Acta Zootaxon Sin*, 1966, 3(2): 160.

Holotype: CIB 008397, male (Figure 3)

Type locality: Mt. Emei, Sichuan, China.

Paratypes: CIB 008398–008406, locality same as holotype.

Other specimens (11): Mt. Fanjing (CIB 008407–008411, CIB 083748), Anlong (CIB 008412), Leishan (CIB 008413) in Guizhou; Xiushan (CIB 008414–15) in Chongqing; Yizhang (CIB 008416) in Hunan.

Distribution: Hunan, Guangxi, Sichuan, Guizhou, China.

Dinodon rosozonatum Hu and Zhao, 1972

Dinodon rosozonatum was described as a new species by

Hu and Zhao in *Key Chin Snakes (= Mater Herpetol Res)*, 1972, 1: 36.

Holotype: CIB 009081, male (Figure 4).

Type locality: Lingshui, Hainan, China.

Allotype: CIB 009082, female, Mt. Wuzhi, Qiongzhong, Hainan.

Paratypes: Lingshui (CIB series 009083, 009086, 009090), Qiongzhong (CIB series 009084–85), Haikou (CIB series 009087–89) in Hainan.

Other specimens (1): No locality data (CIB 072369).

Distribution: Endemic to Hainan, China.

Macropisthodon rufus multiprefrontalis Zhao and Jiang, 1981

Macropisthodon rufus multiprefrontalis was described as a new subspecies by Zhao and Jiang in *Acta Herpetol Sin (Old Ser)*, 1981, 5(7): 55.

Holotype: CIB 009857, male (Figure 5).

Type locality: Xichang, Sichuan, China.

Allotype: CIB 009856, female, locality same as holotype.

Paratypes: Liangshan (CIB 009851), Yuexi (CIB series 009852, 009854), Zhaojue (CIB 009853), Huili (CIB 009855) in Sichuan.

Distribution: Southern Sichuan (Ganluo, Yuexi, Zhaojue, Xichang, Huili), China

Oligodon multizonatum Zhao and Jiang, 1981

Oligodon multizonatum was described as a new species by Zhao and Jiang in *Acta Herpetol Sin (Old Ser)*, 1981, 5(7): 54.

Holotype: CIB 009964, male (Figure 6).

Type locality: Luding, Sichuan, China.

Paratypes: Luding (CIB series 009965–67) in Sichuan.

Other specimens (2): Luding (CIB 072379) in Sichuan; Wulong (CIB 072379) in Chongqing.

Distribution: Sichuan (Luding), Chongqing (Wulong), Gansu (Tianshui), China.

Opisthotropis guangxiensis Zhao, Jiang and Huang, 1978

Opisthotropis guangxiensis was described as a new species by Zhao, Jiang, and Huang, 1978 in *Mater Herpetol Res*, 1978, 4: 21.

Holotype: CIB 009972, male (Figure 7).

Type locality: Jingxiu, Guangxi, China.

Allotype: CIB 009973, female, locality same as holotype.

Paratype: CIB 009974, female, Longsheng, Guangxi.

Distribution: Guangxi, China.

Plagiopholis unipostocularis Zhao, Jiang and Huang, 1978

Plagiopholis unipostocularis was described as a new

species by Zhao, Jiang and Huang in Mater Herpetol Res, 1978, 4: 21.

Holotype: CIB 010195, female (Figure 8).

Type locality: Yunnan, China.



Figure 1 Dorsal (A) and ventral (B) views of the holotype of *Achalinus meiguensis*.

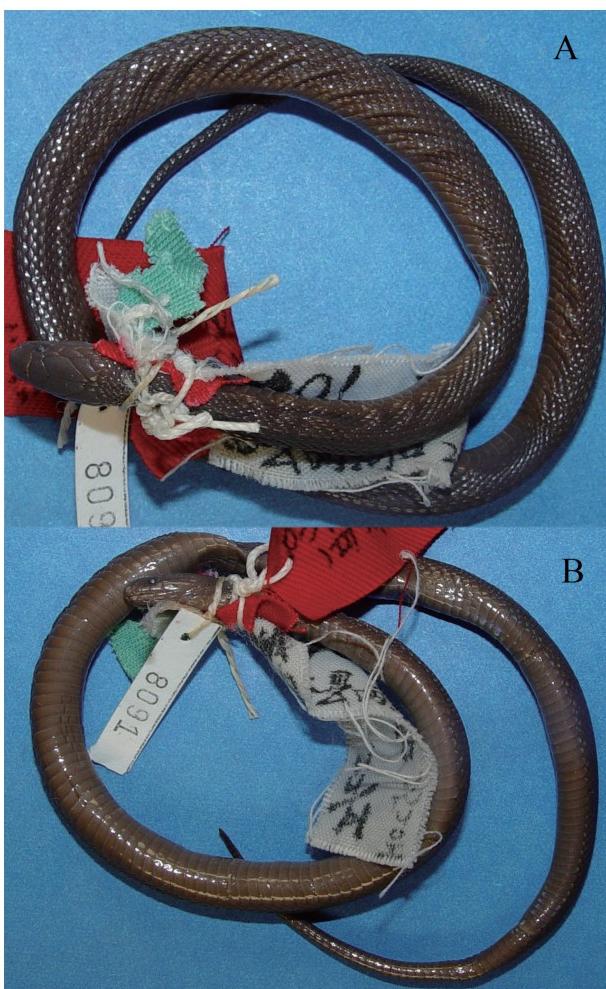


Figure 2 Dorsal (A) and ventral (B) views of the holotype of *Xenopeltis hainanensis hainanensis*.

Distribution: Yunnan, China.

Rhabdophis adleri Zhao, 1997

Rhabdophis adleri was described as a new species by Zhao in Asiatic Herpetol Res, 1997, 7: 166.

Holotype: CIB 010494, male (Figure 9).



Figure 3 Dorsal (A) and ventral (B) views of the holotype of *Amphiesma optata*.



Figure 4 Dorsal (A) and ventral (B) views of the holotype of *Dinodon rosozonatum*.

Type locality: Lingshui, Hainan, China.

Allotype: CIB 010497, female, Qiongzhong, Hainan.

Paratypes: Qiongzhong (CIB series 078032, 083766), Lingshui (CIB series 010493, 095495), Baisha (CIB 010493) in Hainan.

Distribution: Hainan, China.

***Rhabdophis pentasupralabralis* Jiang and Zhao, 1983**

Rhabdophis pentasupralabralis was described as a new subspecies of *Rhabdophis nuchalis* by Jiang and Zhao in Acta Herpetol Sin (New Ser), 1983, 2(1): 60.

Holotype: CIB010714, male (Figure 10).

Type locality: Jiulong, Sichuan, China.

Allotype: CIB010713, female, Zhari, Jiulong, Sichuan.

Other specimens (229): Jiulong (CIB series 010650–712, 010715–856, 078611, 094013), Mt. Emei (CIB series

010857–58, 010862, 010864–71, 010873–74), Dujiangyan (CIB010859–60), Kangding (CIB series 010861, 010863, 010872), Jiuzhaigou (CIB 087268), Yanbian (CIB series 087268–69), Panzhihua (CIB 087271) in Sichuan.

Distribution: Sichuan, Yunnan, China.

Comments: *Rhabdophis pentasupralabralis* was first described as a subspecies of *Rhabdophis nuchalis*. Based on external morphological differences between *Rhabdophis nuchalis nuchalis* and *R. n. pentasupralabralis*, Zhao (1995) elevated the later to specific rank as *R. pentasupralabralis*.

***Sibynophis chinensis miyiensis* Zhao and Kou, 1987**

Sibynophis chinensis miyiensis was described as a new subspecies by Zhao and Kou in Chin Herpetol Res, 1987, 1: 4.

Holotype: CIB 072542, male (Figure 11).

Type locality: Miyi, Sichuan, China.



Figure 5 Dorsal (A) and ventral (B) views of the holotype of *Macropisthodon rufus multiprefrontalis*.



Figure 6 Dorsal (A) and ventral (B) views of the holotype of *Oligodon multizonatum*.



Figure 7 Dorsal (A) and ventral (B) views of the holotype of *Opisthotropis guangxiensis*.



Figure 8 Dorsal (A) and ventral (B) views of the holotype of *Plagiopholis unipostocularis*.

Allotype: CIB 072540, female, locality same as holotype. Paratypes: Miyi (CIB series 072541, 072543–45) in Sichuan.

Other specimens (22): Luding (CIB series 011404–406), Mt. Emei (CIB series 011408, 011410–11, 011413–22), Anxian (CIB 011407), Dayi (CIB 011409), Pengxian (CIB 011412), Hongya (CIB 084005) in Sichuan; No localities (CIB series 084006, 086457).

Distribution: Southern Sichuan (Miyi, Panzhihua, Yanbian), northeastern Yunnan, China.

Comments: In a molecular phylogeny of Colubroidea, *Sibynophis* is the sister genus to *Scaphiodontophis* (Chen *et al.*, 2012). Thus, Chen *et al.* (2012) resurrected the subfamily Sibynophiinae, including *Sibynophis* and *Scaphiodontophis*. Due to their ancient divergence, disjunctive distribution and distinctive features between



Figure 9 Dorsal (A) and ventral (B) views of the holotype of *Rhabdophis adleri*.



Figure 10 Dorsal (A) and ventral (B) views of the holotype of *Rhabdophis pentasupralabialis*.



Figure 11 Dorsal (A) and ventral (B) views of the holotype of *Sibynophis chinensis miyiensis*.

Sibynophis and *Scaphiodontophis*, Chen *et al.* (2012) suggested that *Sibynophis* be placed in the tribe *Sibynophiini*.

Acknowledgements This study was funded by the National Natural Science Foundation of China (NSFC 31071892), the Program for New Century Excellent Talents in University, the Ministry of Education of China (NCET-08-0908), and the Sichuan Foundation for Youth Scientists and Technologists (08ZQ06-006). We thank two reviewers and AHR editors for their comments and corrections on the early draft of this manuscript

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